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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,840	10/22/2003	Jean-Philippe Allen	ATOCM-305	4231

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EXAMINER

POULOS, SANDRA K

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/689,840

**Applicant(s)**

ALLEN ET AL.

**Examiner**

Sandra K. Poulos

**Art Unit**

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/26/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because it is more than one paragraph, more than 150 words, and should not include company/inventor names and the title of the invention. Furthermore, it is unconventional to include bullet points in the disclosure. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

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The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

2. The disclosure is objected to because of the following informalities: The use of bullet points (pages 3, 6-7) and bold typeface (2, 4, 6-7, 9-10) are unconventional.

Appropriate correction is required.

### ***Priority***

3. This application claims the priority of U.S. Provisional application No. 60/425,319 which applicant has indicated was filed in December 11, 2002; this is inconsistent with PTO records. The correct filing date is November 12, 2002. Please note that both the amended specification sheet and pg 11A refer to the incorrect date.

### ***Claim Objections***

4. Claims 1-8 are objected to because of the following informalities:

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- a. Claim 1: insert "A" before "method" at the beginning of the sentence. Please remove the bullet points. Claim 1 contains improper parenthesis "(or steam)". Examiner further suggests omitting "its" from (i) and (ii) (cf. paragraph 5 below).
- b. Claims 2-6: insert "The" before "method" at the beginning of the sentence.
- c. Claim 7: insert "A" before "process" at the beginning of the sentence.
- d. Claim 8: insert "The" before "process" at the beginning of the sentence.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 5. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is unclear because of the phrase "its crystallization temperature" wherein "it" could refer to the polyamide or water.

Claims 2-3 recite the limitation "the temperature". There is insufficient antecedent basis for this limitation in the claim. "The temperature" could refer to the crystallization temperature or the temperature of the water/steam.

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Claim 7 recites the limitation "the sintering of" in line 1. There is insufficient antecedent basis for this limitation in the claim. Examiner suggests replacing "the sintering of" with "sintering." Claim 7 further recites the limitation "from the grinding of granules." Examiner suggests replacing "from the grinding of granules" with "from grinding the granules"

Claim 5 appears to improperly recite a Markush group. Consequently, it is impossible to determine which elements of the group are required by the claim. When materials recited in a claim are so related as to constitute a proper Markush group, they may be recited in the conventional manner, or alternatively. For example, if "wherein R is a material selected from the group consisting of A, B, C and D" is a proper limitation, then "wherein R is A, B, C or D" shall also be considered proper (emphasis added). See MPEP § 2173.05(h). Examiner suggests "wherein the polyamide is selected from the group consisting of ...."

Claims 4, 6, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being dependent upon a rejected base claim.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilles (US 3,019,210) in view of Scholten et al (US 6,245,281), Ludewig (US 3,335,115), and Peerlkamp (US 4,945,152).

Gilles '210 discloses mixing water and finely divided nylon powder (col 1, lines 36-57). The mixture is dried and the nylon is sintered (col 1, lines 65-70).

Gilles '210 does not disclose: nylon-12 or the sintering as laser sintering, the temperature of the mixture as close to the crystallization temperature, or that the duration of treatment is long enough to effect an increase in melting point or enthalpy of the polyamide.

Scholten '281 discloses a process for producing shaped articles by laser sintering a nylon 12 pulverant material (abstract).

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Ludewig '115 discloses polyamides mixed with water and heated to 160-180°C (col 2, lines 3-49). The water and polyamide are separated and the polyamide is spun into threads (example 1).

Peerlkamp '152 discloses a method of increasing enthalpy for polyamide articles by heat treating the polyamide for up to 24 hours (abstract).

It would have been obvious to one of ordinary skill in the art to modify method in Gilles '210 to use nylon 12 and laser sintering as disclosed by Scholten '281 because the method permits rapid and low cost manufacture of shaped articles from nylon 12 powder, the nylon 12 provides a very tough material for the shaped articles (col 1, lines 5-27; col 3, lines 40-50). One would further modify the polyamide-water mixture by using the temperatures of Ludewig '115 because in doing so the resulting polyamide has less undesirable characteristics because there are less monomeric components (col 1, lines 56-62). Lastly, one would further use Peerlkamp's method of increasing enthalpy for polyamide articles by heat treating the polyamide for up to 24 hours because polyamide articles comprising the polyamide of the invention possess very high mechanical properties, low creep, low water adsorption, better oxidative stability and environmental stress cracking resistance (col 2, lines 35-40). Therefore, by using the method of combining nylon and water of Gilles '210 with the improvements disclosed by with Scholten '281, Ludewig '115, and Peerlkamp '152, one would obtain the invention in the presently cited claims.



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**Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fischer et al (US 5,723,538), Ferraro et al (US 3,844,991), Smith et al (US 5,095,058), and Wittcoff (US 2,728,737) disclose aqueous dispersions of polyamides.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra K. Poulos whose telephone number is (571) 272-6428. The examiner can normally be reached on M-F 7:00-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKP

Sandra K. Poulos

1/9/06